

# Ocean Alaska Science and Learning Center

## Annual Report and Accomplishments

October 1<sup>st</sup>, 2013 – September 30<sup>th</sup>, 2014

*A partnership dedicated to understanding and preserving the marine ecosystem connecting Alaska's national parks through research and education.*



Lake Clark National Park & Preserve Shoreline. NPS Photo/Jim Pfeifferberger

There are 11 national park units with significant marine resources in Alaska:

Cape Krusenstern National Monument  
Noatak National Preserve  
Bering Land Bridge National Preserve  
Aniakchak National Monument & Preserve  
Katmai National Park & Preserve  
Lake Clark National Park & Preserve  
Kenai Fjords National Park

Wrangell-St. Elias National Park & Preserve  
Glacier Bay National Park & Preserve  
Klondike Gold Rush National Historical Park  
Sitka National Historical Park

Collectively they comprise more than 3600 miles of Alaska's coastline, and more than 32% of the coastline in the entire National Park Service. The Ocean Alaska Science and Learning Center is one of 19 Research Learning Centers (RLC) nation-wide whose mission is to increase the effectiveness and communication of research in the national parks. As an RLC, the Ocean Alaska Science and Learning Center (OASLC) strives to understand and preserve the marine ecosystem connecting Alaska's 11 coastal parks through research and education.

## Synopsis

FY14 marks a highly successful year for the OASLC. We accomplished all but one of the high priority items we identified at the beginning of the year (see below), and laid the ground work for success to achieve the final item (drafting a strategic plan) in FY15. FY14 continued a multifaceted transition of operations as we strive to implement several suggestions from our 2012 management review. As we continue this transition our operations from one year to the next may look a bit different from the preceding and proceeding fiscal years, as should be expected. Legacy projects will come to an end, and new approaches to accomplishing our work will come online. We anticipate this transition to reach an end stage beginning in FY16 with the implementation of a new five year strategic plan.

Near the beginning of the year the OASLC Board of Directors sought to fulfill a recommendation of the 2012 management review to stabilize the annual funding of the OASLC. An amendment to the Board charter established the annual budget at the 2001 level of \$645,000 which established the OASLC, plus or minus any region or service wide funding adjustments. Administrative costs of the program would continue to be the burden of Kenai Fjords National Park.

Nevertheless FY14 proved to be a roller coaster ride for the OASLC budget. At the beginning of FY14 the yoke of sequestration was still upon us with a ~10% cut from FY12. After outlining a work plan for the year that cut was changed to only 1% from FY12 in January. The increase in budget came at an awkward time when parks were heavily committed to their projects for the summer and review of the Coastal Marine Grant proposals left little time to design fully vetted and reviewed projects. Many opportunities that might have existed in October of FY14 were no longer available by January of FY14.

In the end the OASLC operated with a budget of \$638,550 (\$645,000 minus a 1% WASO reduction). We spent all but \$18 to finish the year < 0.02% in the green. The OASLC was able to execute nine new CESU agreements with the Alaska SeaLife Center (\$135,106 for research; \$127,169 education/outreach; \$262,785 total) and modify one existing CESU agreement with the Kachemak Bay Research Reserve (\$27,500 for education/outreach), a significant improvement from FY13. We also contracted a facilitator to help draft a strategic plan in FY15, and provided fiscal support to several parks through a variety of projects, personal services and supplies.

The OASLC was also tasked with coordinating the challenging task of spending down the coastal settlement funds. These funds had been the source of the annual Pacific Ocean Parks Strategy Technical Assistance Call (POPS TAC). A request for proposals was initiated using criteria established by the

Alaska Leadership Council seeking to fund several larger (six figure) marine focused interdisciplinary projects involving partnerships between multiple parks. Rating and ranking of the proposals was accomplished by the OASLC Technical Committee. Projects were selected by the OASLC Board of Directors and approved by the Alaska Leadership Council. Eight projects out of 47 were funded and their detailed implementation plans (DIPs) are in various stages of review.

The coordination of these Coastal Marine Grants entailed a considerable amount of our time and included participation on a committee to establish rating criteria, several conference calls with parks explaining the process, coordinating proposal submissions, leading the technical rating panel, facilitating the Board selection process, coordination of Detailed Implementation Plan submission, and liaising with the National Park Foundation. We anticipate continuing this coordination for the next few years, albeit with much less of our time needed to do so. That being said, several elements of the funded projects involve the OASLC itself and our involvement in specific projects will continue to be significant in the future.

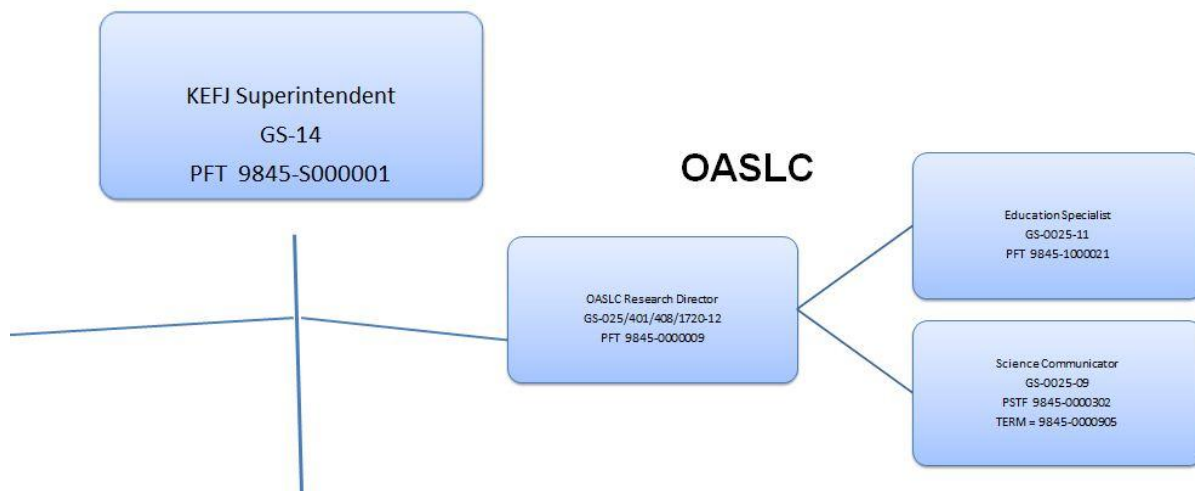
### OASLC Staffing and Other Personal Services



OASLC Science Communication Specialist Erin Kunisch gives a presentation at a teacher's workshop on Ocean literacy Principle #1: The Earth has one big ocean with many features.

- Benjamin Pister and Jim Pfeifferberger continue to serve as director/research coordinator and education coordinator respectively. (Budget Line 1-2)

- Erin Kunisch came on board as the science communication specialist in September. Filling Erin's position completes a recommendation of the 2012 management review to "hire a cutting edge media specialist." The position description has evolved into a science communication specialist. We anticipate Erin will be heavily engaged in communicating the region's scientific activities through both written and social media. Erin's research background is with marine mammals, specifically northern fur seals in the Pribilofs. (Budget Line 3)
- The OASLC covered four pay periods of Rebekah Jones' time to work on Kachemak Bay Research Reserve Discovery Lab on estuaries and other topics. Rebekah is an interpreter with Lake Clark National Park & Preserve (LACL) and works out of Homer, Alaska. In turn, LACL was able to pay for some of Alex Lindeman's time to improve their website. (Budget Line 6)
- After Jeff Mow departed for Glacier National Park, Pam Rice filled in as the KEFJ Superintendent/OASLC supervisor on the Board of Directors. Bekki Lasell took over the role for the long term when she arrived in January.
- Susan Boudreau, who represented southeast Alaska parks (including WRST) on the Board of Directors retired as superintendent of Glacier Bay National Park & Preserve in May. She was replaced by Philip Hooe, the new superintendent of GLBA, in September. Philip was chosen by the southeast parks he represents.
- The OASLC Board of Directors chose Frank Hays, superintendent of Western Arctic Areas as chair over the summer. His tenure will continue through FY15.
- The OASLC Technical Committee was established in the fall of FY14. The committee consists of multi-disciplinary NPS staff representing various regions in Alaska.
- An SCA media intern, Katy Kildee was located at Sitka National Historical Park (SITK). Katy is the latest in line of outstanding photojournalism students from Central Michigan University to spend a summer at one of Alaska's national parks as an SCA student intern. Housing, stipend, equipment and supplies and SCA administrative costs were covered by the OASLC. Supervision was provided by Becky Latanich, Chief of interpretation at SITK. Katy worked on several projects, including photo documentation of an Alaska Native clan collection, managing the park's Facebook page, extensive video editing, and a photography workshop for locals. OASLC also provided SITK with a computer for the intern's use. (Budget Line 5)



The OASLC section of the Kenai Fjords org chart.

## FY14 High Priority Tasks

These were tasks we identified at the beginning of FY14 as deserving of extra effort, if necessary, to complete during FY14.

- Revamp the OASLC website. As of May 31<sup>st</sup> our new website is <http://www.nps.gov/rlc/oceanalaska/index.htm>. This website is the culmination of a nationwide transition to the CMS format of website. Our old website was housed outside of the DOI network, the new one is inside. Adding more content will be part of our FY15 work plan and strategic planning process.
- Hire Science Communication Specialist (See OASLC Staffing, above). After a competitive process, Erin Kunisch was hired as the STF Science Communication Specialist. Erin has a background in marine science, her Masters focused on marine mammals in the Pribilofs. She is very enthusiastic about communicating science and is familiar with Alaska and many of the scientists and even NPS staff working in the state. Erin began at the end of September.
- Sign new CESU agreements with the Alaska SeaLife Center (ASLC) and Kachemak Bay Research Reserve (KBRR, see Agreements/Partnerships, below). Nine new CESU agreements with the ASLC were executed, which includes the eight agreements we started the year intending to execute, and one additional agreement we developed mid-season. Most of these agreements were for ongoing work, and were simply executed to make them easier to administer in the long run. In addition, our CESU agreement with Kachemak Bay Research Reserve was modified to include more time and money. (Budget Lines 9-20)
- Coastal Settlement Funds Spend Down. The OASLC was asked to lead the process to spend funds from three different cruise ship settlements, as directed by WASO and AKRO. These were the funds that previously supported the Pacific Ocean Parks Technical Assistance Call (POPS TAC). The OASLC Technical Committee reviewed and ranked the projects according to the ALC

approved rating criteria. The OASLC Board recommended proposals from the ranked list and the ALC approved the proposals in April. Each project has a Detailed Implementation Plan in various states of review.

- Conduct OASLC Strategic Planning Process. This is the only high priority item we did not complete, due to a series of false starts in finding a facilitator. We did secure a contract with Jan Caulfield Inc., to provide facilitation services during a series of virtual planning meetings to be held in FY15. (Budget Line 22)

## External Agreements and Partnerships

The Alaska SeaLife Center (ASLC) and Kachemak Bay Research Reserve (KBRR) constitute the primary external partners for the OASLC in FY14. Since its inception, the OASLC has worked very closely with the ASLC on several research and education projects. Our partnership with KBRR is in its third year, and to date has focused on marine science education outreach. With the exception of the Mentoring Ocean Connections Distance Learning Workshop and the ocean acidification teacher workshop, each of the ASLC agreements were proposed and agreed to in FY13, but fell through due to changes in the agreements process. We wish to note that processing and managing these agreements includes a significant time commitment. We estimate that approximately two pay periods (80 hours) of the director's time was devoted to writing and processing agreements alone.

- Annual Teacher Workshop: Teachers from around the state attend this annual workshop that emphasizes hands-on activities, NPS mission and themes, and direct interaction between teachers and researchers at the ASLC. This highly successful program is in its 10<sup>th</sup> year. We used a CESU agreement to transfer \$17,932 for a workshop focused on ocean literacy principles. The workshop was planned for October 2014. No workshop took place in 2013. The money primarily covers ASLC staff salaries, lodging and meals for the teachers. Our significant involvement includes OASLC staff time to planning and conducting the workshop. (Budget Line 16 )

*Here is some selected feedback we have received from participating teachers in the past . . .*

*"I thought it was a great combination of general content and specific lesson ideas. It's nice to hear from scientists and educators. I feel like I am going home with some great resources."*

*"This is up there on my list of 'best classes ever' in undergrad, grad school, and continuing ed classes. Thank you so much for all of the amazing resources. Cannot think of one I will not use."*

*"Great ideas. My entire 4th quarter will be from this workshop."*

*"Excellent workshop! Very organized! Love the 'hands-on' sessions."*

*"Having researchers present their work first hand was a wonderful opportunity to glimpse what their daily lives are like-what drives them and their passion for their subject."*



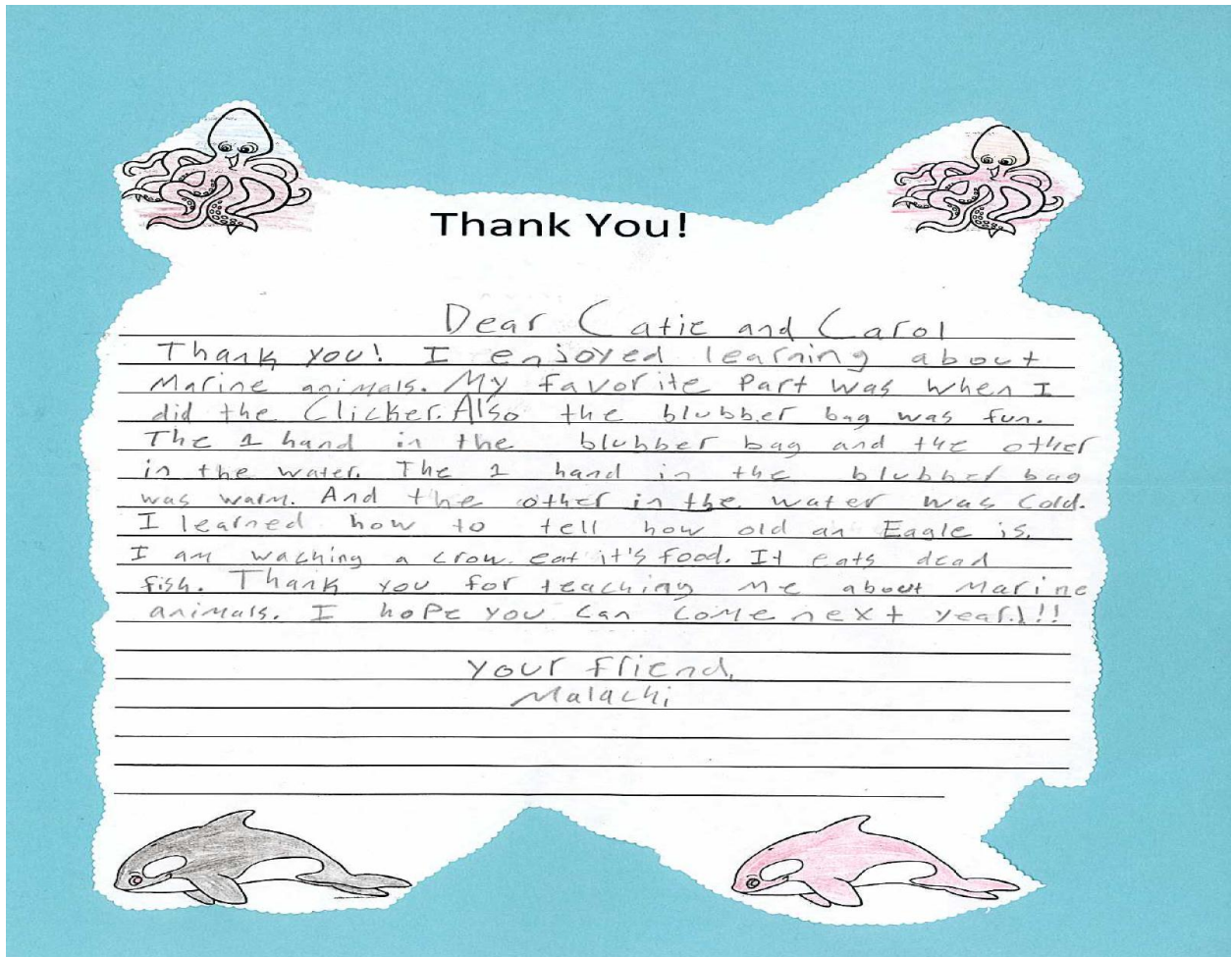
Dr. Russ Andrews delivers the keynote address at the annual OASLC teacher workshop.

- Alaska SeaLife Center/NPS Intern Development: This project funds three shared interns who split their time approximately 50/50 between providing interpretation at the ASLC and providing hands-on learning activities at the KEFJ Information Center and on board KEFJ boat tours during the summer. Interns are mentored by ASLC and coached by KEFJ Interp rangers while on board the M/V Star of the Northwest, a Major Marine tour boat. This project takes advantage of the grandiose scenery offered by the park and the hands on experience highlighted by the ASLC. We used a CESU agreement to transfer \$7,534 to the ASLC, which covers housing and stipends. (Budget Line 17)
- Mentoring Ocean Connections Distance Learning Workshop at the Alaska SeaLife Center: This workshop brings together teachers from remote communities and distance learning experts to create “mentor” teachers who can return to their villages with knowledge of how to better integrate distance learning into their classrooms. This is the third year of presenting this workshop, which will occur during the 2014-2015 school year. GLBA, DENA, and KEFJ have participated in the past, and GLBA is slated to participate this coming year in an instructor role, which provides the NPS significant involvement. We used a CESU agreement to transfer \$21,234 to the ASLC. (Budget Line 14)
- Village Outreach: The OASLC has partnered with the Alaska SeaLife Center to provide Village Outreach for several years to bring high quality, hands-on marine science education to bush schools, particularly in gateway communities or communities with some connection to NPS lands. This year the OASLC transferred \$22,645 in a CESU agreement to visit specific villages to be determined during the school year of 2014-2015. Villages will be in the Northwest Arctic

School District, Nome and Bering Strait School District, Chatham School District, Lake and Peninsula School District and the Kenai Peninsula School District. In addition, KEFJ contributed an additional \$20,000 (not shown in the OASLC budget) for outreach to Port Graham, Nanwalek and Seldovia. To the extent possible, NPS staff will accompany ASLC staff to village schools to deliver park based presentations. Funding covers travel and personal services for ASLC staff. (Budget Line 15)

- Ocean Acidification Teacher Workshop: This year the OASLC began planning a new teacher workshop focused specifically on ocean acidification in Alaska. The workshop will take place in Sitka and will target rural school teachers in southeast Alaska. This project is a scaled down version of a much larger project submitted to the Coastal Marine Grants but was not successful. Funds are primarily used to cover staff time for the ASLC and travel costs for rural teachers who would not normally be able to attend, as well as workshop logistics. We used a CESU agreement to transfer \$58,334 to the ASLC. The OASLC is also involved in planning the workshop, and local park staff has been invited to participate. (Budget Line 18)
- Harbor Seal Research: The ASLC and OASLC have collaborated on harbor seal research in Aialik Bay for over ten years. This year we transferred funding on the condition that no additional field work will be conducted, final data analyses take place, all data be transferred to NPS and the project be brought to a close. This final year was necessary to see the project completed and data published. This work will be conducted during the winter of 2014 and 2015. We used a CESU agreement to transfer \$24,346 to the ASLC. Although this project directly benefits KEFJ, like all research, it also indirectly benefits any park or agency with harbor seal ice habitat. (Budget Line 12)
- Seabird Research: The Alaska SeaLife Center is in the midst of a multi-year seabird research project in Resurrection Bay. This project investigates both productivity and habitat use of Black-legged Kittiwake and Common Murre colonies. It also includes monthly seabird surveys designed to complement work done by SWAN and others as part of the larger Exxon Valdez Oil Spill Trustee Council-sponsored GulfWatch program. Surveys are conducted monthly throughout the year and yield the only data on seabird abundance in the area during the winter time, with the exception of the SWAN winter bird surveys. We used a CESU agreement to transfer \$75,522 to the ASLC. Data is scheduled to be analyzed beginning of FY15 and OASLC will be documenting the project. This project is a multi-year project that must be completed in order to gain the benefits of our investment. (Budget Line 9)
- Predatory fish as samplers of Forage Fish Base: This is a multi-year citizen science project that uses halibut, salmon and ling cod caught by local charter vessels to study the smaller forage fish (herring, sand lance, etc.) that form the lower rungs of the food chain. A researcher removes the stomachs from fish caught by the charters and analyzes the contents in the lab. The data is paired with information on where the fish were caught given by charter captains. Over time the data provides trends in forage fish abundance throughout the year. This project is a multi-year project that must be completed in order to gain the benefits of our investment. We used a CESU agreement to transfer \$18,207 to the ASLC. (Budget Line 10)

- **Bioindicators for Coastal Monitoring:** The ASLC is conducting experiments on mussels and razor clams to design a series of tests that could be used to rapidly and cheaply determine the environmental conditions in remote coastal parks. The goal, for example, would be to collect a small number of mussels or clams and with a few quick tests be able to determine whether any fossil fuels had been spilled in the area, whether the area is experiencing any warming, or other forms of environmental stress. We used a CESU agreement to transfer \$17,031. This project, including sampling equipment, and relates directly to the Changing Tides Coastal Marine Grant. (Budget Line 11)
- **Discovery Labs, Kachemak Bay Research Reserve:** This is the third year of funding for this marine science outreach program. The program includes hands-on activities designed for the general public or K-12 students and focus on a broad marine science topic. In FY14 a Discovery Lab on climate change was conducted with mixed reviews (funded with FY13 money). A Discovery Lab on estuaries (funded by FY14 money) was also developed and delivered to the public with great success. The same Discovery Lab will be delivered to Homer schools in November, and to Port Graham, Nanwalek, Seldovia (KEFJ villages), Newhalen, Nondalton and Port Alsworth (LACL villages) during the school year. After our budget eased in January we increased the project by \$8,000 to add the LACL villages. We used a CESU agreement modification to add \$27,500 to this agreement. (Budget Line 20 )



A thank you note from a Port Graham student to the Kachemak bay Research Reserve after the delivered an OASLC funded Discovery Lab.

## Contracts

- The OASLC initiated a single contract for facilitation services in conjunction with our strategic planning in FY15. Independent government estimates averaged \$22,500. The successful bid was \$16,500, by Jan Caulfield Inc. (Budget Line 22)

## Education/Outreach

- Ranger-in-Residence Program: This program sends KEFJ Interpretation rangers to the ASLC to deliver public talks on NPS research projects. Talks are delivered twice per day in the summer season. This year topics focused on climate change and the ever popular coastal archeology project conducted several years ago in KEFJ. Two new talks on Black Oystercatcher research and marine debris are currently being developed for 2015. These talks are delivered by the fjord rangers, who rotate at the ASLC. \$34,694 for 1.5 FTE. (Budget Line 4)

- National Ocean Science Bowl (NOSB)/Tsunami Bowl: This is a regional quiz bowl competition that attracts high school students from across the state. The winner attends a national competition. We organized a team of NPS volunteer officials, judged research papers and oral presentations, and provided \$1500 in prizes. The contest is in February/March. (Budget Line 51)
- SCA Academy: This is a week-long program designed to attract diverse youth to SCA positions. We support the academy with our time by participating in academy activities such as a hike to Tonsina and the career speed-dating exercise. The academy occurs in March.
- Alaska Science and Engineering Fair in Anchorage: This fair features a “fair within a fair” devoted to Ocean Sciences and is conjunction with the Alaska SeaLife Center. Benjamin judged the middle school science projects related to ocean sciences. The fair occurs in March.

## Research

Other than the research projects conducted by the ASLC, the OASLC supported no other research projects in FY14.

## Park Support

- KLGO: Benjamin visited KLGO to gain some orientation and meet with park staff and external partners. The goal was to learn about the resources and begin developing potential projects of benefit to both OASLC and KLGO.
- SITK: Benjamin and Jim visited SITK to gain some orientation and meet with park staff and external partners. The goal was to learn about the resources and begin developing potential projects of benefit to both OASLC and SITK.
- SITK: Katy Kildee served SITK as a multi-media SCA intern (see OASLC Staffing section above).
- LACL: Jim travelled to LACL and gathered stock footage on bears in coastal meadows and estuaries.



A volunteer introduces the voracious *Pycnopodia helianthoides* (sunflower star) to some children during Intertidal Ethics and Sea Week at Sitka National Historical Park. NPS Photo/Katy Kildee

## Presentations

- Alaska Marine Science Symposium: The OASLC sponsors this scientific conference and runs an exhibit table during the poster sessions. Sponsorship totaled \$1500 and included Benjamin's registration, exhibit space, and sponsorship acknowledgement in printed programs. The OASLC also paid for Bud Rice's registration of \$200 (Budget Lines 26, 50)
- Introduction to the Ocean and Ocean Issues: Both Jim and Benjamin gave presentations to SITK and KEFJ Interp seasonal staff in the spring.
- Pacific Ocean Education Team (POET): Jim coordinates monthly research webinars for this bi-regional group. The OASLC also paid to transcribe all recorded POET webinars to bring them into ADA compliance for the hearing impaired. (Budget Lines 89-92)
- Marine debris and invasive species: Benjamin gave three invited talks on marine debris and invasive species at the Alaska Invasive Species Conference in Fairbanks (November, ~60 people), Alaska Forum for the Environment (February, ~70 people) and the Anchorage Museum (February, ~40 people).
- AAPLIC: Benjamin gave a public lecture on evaluating the quality of scientific information in the media in Anchorage in July. Sixty-three people attended.

- “Tunes from the Tides”: Jim visits Seward Elementary classrooms to introduce elementary students to marine animal adaptations and NPS values through hands-on activities and music during the 2014-2015 school year.



Jim Pfeifferberger delivers his Tunes from the Tides program to Seward Elementary students.

## Training

- Jim provided CPR training to KEFJ staff.
- Jim led MOCC for KEFJ seasonal staff, along with other KEFJ MOCC instructors.

## Multi-media

- Facebook: Jim provided assistance with Facebook pages for KEFJ, LACL and BELA.
- 360 North: Jim formatted research videos for broadcast statewide on public cable channel 360 North.
- KEFJ Park Film: Jim provided extensive expertise, narration and stock footage for the KEFJ park film.
- Arctic Impression Exhibit: The OASLC paid for the production and transport of an exhibit based on the ShoreZone Arctic Impressions photography to Arctic villages related to the project. This effort was led by Tahzay Jones and Linda Jeschke. (Budget Line 93)

- Jim provided Marine Debris Videos for inclusion in outreach materials in marine debris education kits through the Center for Coastal Studies/AFE.

### Logistical Support

The OASLC provided housing for NPS staff conducting salmon research at KEFJ. \$215 (Budget Line 94)